First and Second Quarter 2018
Issues Combined

Kentucky Diabetes Connection

The Communication Tool for Kentucky Diabetes News

AACE
American Association of Clinical Endocrinologists Ohio River Regional Chapter

ADA
American Diabetes Association

DECA
Diabetes Educators Cincinnati Area

GLADE
Greater Louisville Association of Diabetes Educators

JDRF
Juvenile Diabetes Research Foundation International

KADE
Kentucky Association of Diabetes Educators

KEC
Kentuckiana Endocrine Club

KDN
Kentucky Diabetes Network, Inc.

KDPCP
Kentucky Diabetes Prevention and Control Program

TRADE
Tri-State Association of Diabetes Educators

A Message from Kentucky Diabetes Partners

KENTUCKY DIABETES NETWORK SELECTS NEW BOARD

The Kentucky Diabetes Network (KDN) announced the 2018 Board of Directors, pictured above, left to right: Melissa Hounshell, Community Outreach Director, Markey Cancer Center, University of Kentucky; Sriprakash Mokshagundam, MD, Endocrinologist, Associate Clinical Professor, University of Louisville; Brook Hudspeth, PharmD, CDE, MLDE, Diabetes Care Pharmacist, Kroger, Lexington; Thursa Sloan, RN, MSN, Public Health Director, Floyd County Health Department; Julie Brown, Sales Account Representative Consultant, Anthem Blue Cross Blue Shield; Tom Walton, MD, MS, Executive In Residence, School of Public Health, University of Louisville; and Connie White, MD, MS, FACOG, Senior Deputy Commissioner, Kentucky Department for Public Health. Not pictured, Sathya S. Krishnasamy, MD, Endocrinologist, Associate Professor, University of Louisville.

If you would like to be added to the mailing list to receive this newsletter, please contact: Kentucky Diabetes Connection, P.O. Box 309, Owensboro, KY 42302-0309 or Phone: 270-686-7747 ext.: 3031 or Email: janice.haile@ky.gov.
NOTE: Editor reserves the right to edit for space, clarity, and accuracy.

DIABETES DAY AT THE CAPITOL 2018

ADVOCATES MET WITH LEGISLATORS ON FEBRUARY 21ST

KENTUCKY DIABETES NETWORK, INC.

Submitted by: Janey Wendschlag, Kentucky Diabetes Network (KDN) Executive Director

On February 21, 2018, approximately thirty diabetes advocates met for a *Diabetes Day at the Capitol* event. Speakers included: Lisa and Kara Middleton, Randy Gaither, Bob Babbage, Stewart Perry and Debbie Bell.

Diabetes information and stories were shared during visits with over fifty legislators. Maps showing Kentucky's progress in the number of available accredited and recognized Diabetes Self-Management Education and Support (DSMES) programs as well as CDC's Recognized Diabetes Prevention Programs (DPP) were also shared with legislators.

The majority of lawmakers voiced understanding of how diabetes education programs impact not only health care costs but the lives of Kentucky citizens as well. Diabetes professionals and advocates are encouraged to maintain contact with their legislators on a regular basis to reinforce awareness regarding Kentucky's diabetes needs.

Kara Middleton, pictured in the photo on the left, shared her story about living with diabetes at the Kentucky Diabetes Day at the Capitol 2018 held in Frankfort on February 21st.

Kara and her mother Lisa Middleton, pictured in photo on the right, in the middle, visited legislators to discuss diabetes needs in Kentucky. Also pictured in the photo is Kristen Rowland, standing on the left, with the American Diabetes Association.

Representative Arnold Simpson, of Covington, pictured above in the center, discussed diabetes needs in Kentucky with Janey Wendschlag, left, and Julie Shapero, right.

Representative Diane St. Onge, who represents part of Boone and Kenton County, is pictured above on the right, visiting with Janey Wendschlag, left, and Julie Shapero, in the middle.

Diabetes Day At The Capitol 2018 *(Continued)*

Senator Ralph Alvarado, pictured above in the blue suit, talks with Kara Middleton, pictured in the front, as other diabetes advocates listen in.

Senator Julie Raque Adams of Louisville, the chair of the Senate Health and Welfare Committee, is pictured above on the left with diabetes advocates Anne Berry and Bob Babbage.

Debbie Bell, with the Franklin County Health Department and part of the KDN Advocacy Committee, addressed diabetes advocates who attended Diabetes Day at the Capitol on February 21st in Frankfort.

Representative Kim King, pictured above left, visits with Kara and Lisa Middleton during Diabetes Day at the Capitol 2018.

Representative Kimberly Poore Moser, who represents parts of Campbell and Kenton County, is pictured above on the left after meeting with Janey Wendschlag, KDN's Executive Director.

Diabetes advocates pose for a photo and include left to right: Randy Gaither, Dr. Connie White, Bob Babbage with Kara Middleton, in front, and her mother, Lisa Middleton.

American Diabetes Association.
Cure • Care • Commitment®

Improving Performance on High Priority Outcome Quality Measures

Through Collaboration With the Kentucky Department for Public Health and the Kentucky Primary Care Association

Amal Iftikhar

Trudi Matthews

Mary E. Luvisi

Submitted by: Amal Iftikhar, MD, Practice Transformation Advisor, Trudi Matthews, Managing Director, and Mary Luvisi, Technical Project Specialist, Kentucky Regional Extension Center (REC)

Purpose

Kentucky ranks eighth highest nationwide for cardiovascular disease rates, with 30% of all deaths in Kentucky attributed to cardiovascular disease. The Kentucky Regional Extension Center (REC) at the University of Kentucky began working with the Kentucky Department for Public Health (KDPH) and members of the Kentucky Primary Care Association (KPCA) to investigate innovative solutions leading to improved performance of clinical quality measures. Through their collaborative efforts, the group was able to pilot a unique project focused on improving performance on two high priority outcome measures: Hypertension: Improvement in Blood Pressure (NQF 0018) and Diabetes: Hemoglobin A1C Poor Control >9% (NQF 0059) in September 2014. The purpose of the pilot was to validate practice data reporting capacities, monitor practice data on a real-time basis, and use clinical quality data from electronic health record systems to support population health improvement.

There are currently six practices / health systems, with more than 96 providers across 36 locations, participating in the pilot:

- Juniper Health
- London Women's Care
- Cumberland Family Medical Center, Inc.
- Murray Medical Associates
- Mountain View Family Practice
- Mountain Comprehensive Health Corporation

Results

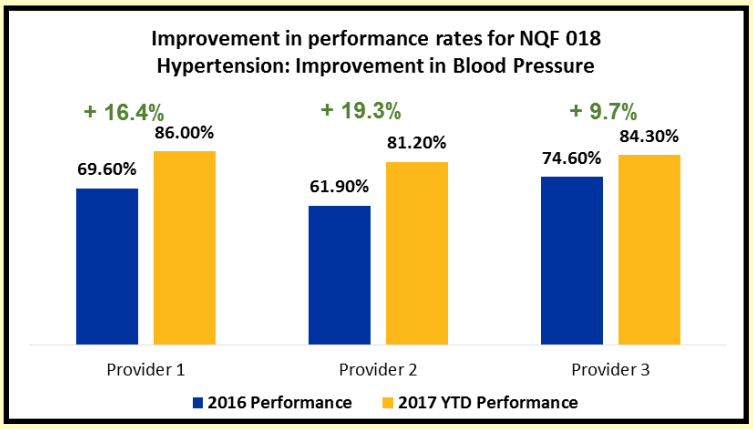
The collaborative efforts of the KYREC, KDPH Chronic Disease Prevention Branch and members of the KPCA have resulted in a team approach to assist practices in improving performance on the identified quality measures.

This approach focuses on:

- Assigning practice advisors to assist practices / health systems to use evidence-based interventions (EBIs) focused on provider reminders, patient reminders, reducing barriers and provider assessment and feedback.
- Reporting of validated monthly clinical quality measure data to drive improvement in hypertension and hemoglobin A1c control.
- Providing guidance and support as practices test and implement changes to clinical workflows through Plan, Do, Study, Act (PDSA) cycles.
- Increase practice capacity for regular monitoring of aggregated and standardized quality measures at the provider and system level on a consistent basis for continuous quality improvement.

Achievements

One of the participating practices, Juniper Health, implemented a PDSA on improved blood pressure measurement techniques. They utilized the CARE Collaborate, a blood pressure awareness tool, to facilitate patent engagement in their quality improvement efforts. Participating providers were able to achieve a 17.17% improvement (from 66.66% in 2016 to 83.83% in 2017 YTD) in the percentage of patients with adequately controlled blood pressure (< 140/90), versus 3.65% (73.025% in 2016 and 76.68% in 2017 YTD) for non-participating providers. In addition, this practice started providing and referring patients to group Diabetes Self-Management Education and Support (DSMES) sessions and has reduced the percentage of patients with uncontrolled diabetes (HbA1c >9) by 6.6% (from 32.3% in 2016 to 25.6% in 2017 YTD). In September 2017, the Juniper Health DSMES program achieved national accreditation with the American Association of Diabetes Educators (AADE).



Improving Performance on High Priority Outcome Quality Measures *(Continued)*

Another exceptional achievement of the collaborative efforts between KY REC and KDPH has been the release of a comprehensive toolkit aimed at equipping providers in the state of Kentucky with usable tools and tips to address different aspects of clinical quality improvement. The ***Improving Cardiovascular and Diabetes Care and Outcomes*** toolkit is a convenient resource for practices embarking on the journey to quality improvement as well as tenured practices refining their current processes. The toolkit offers a wealth of quality improvement ideas covering operational efficiency, evidence based interventions, patient self-management and data driven quality improvement. The toolkit can be accessed through the KYREC and Kentucky Diabetes Network (KDN) websites through the link noted under the Toolkit picture.

Another practice has recently implemented the CARE Collaborative focused on patient education regarding cardiovascular health and high-risk conditions such as stroke and acute myocardial infarction. Other initiatives include but are not limited to utilization of patient generated health data and remote monitoring for real-time patient engagement. All practices have shown positive changes to their reporting rates for the two measures.

Professional Education

The Kentucky REC has also hosted a number of educational events including a series of Healthcare Transformation Survival Seminars across the commonwealth, and participated in the annual Kentucky Primary Care Association Conference reaching out to 440 members of the community including close to 80 primary care providers.

These events targeted to provide an in-depth look at principles of quality improvement with a focus on hypertension and diabetes poor control in addition to other topics such as the new regulations under Medicare and CHIP Re-authorization Act (MACRA) and the Quality Payment Program and their impact on daily clinical operations.

The quality improvement team at the Kentucky Regional Extension Center has a focus on collaborating with community partners and shared education. Whether it is through the Kentucky Statewide Diabetes Symposium, the CARE Collaborative training through the Kentucky ShareFest, or the continuing educational webinars we host, we aim to bring the best resources to Kentucky providers and practices.

Connect with Kentucky Regional Extension Center (REC)

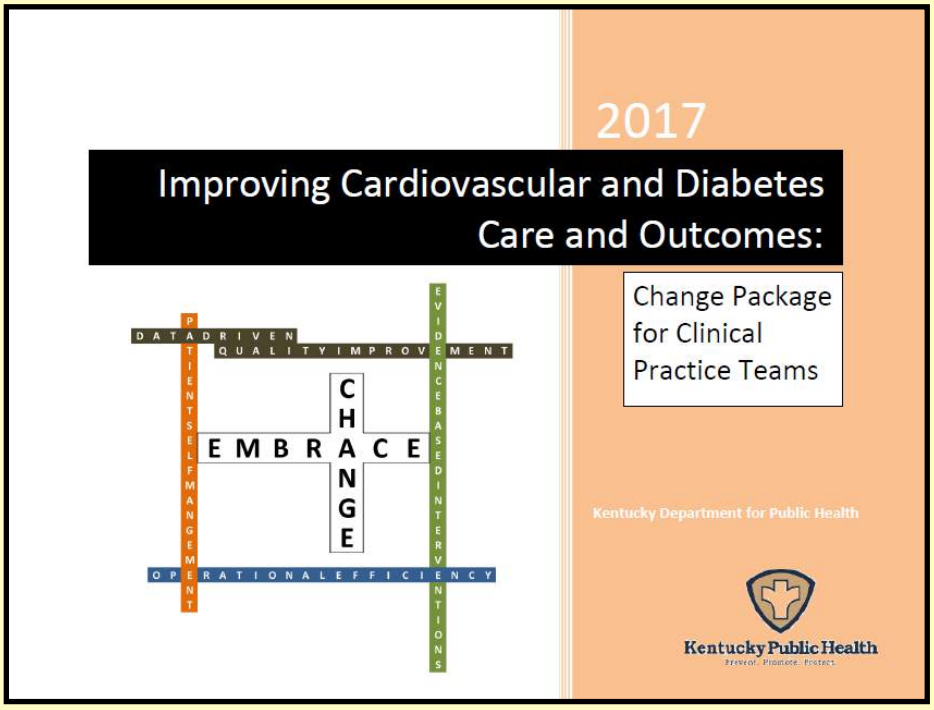
For years, the Kentucky REC at the University of Kentucky has provided comprehensive, individualized support to health care providers across the commonwealth.

For More Information:

Kentucky REC's Quality Improvement Resources:
http://www.kentuckyrec.com/services/macra/quality-improvement/

Kentucky REC Phone:
(859) 323-3090

Kentucky REC Email:
kyrec@uky.edu.



A TOOLKIT, pictured above, developed by KYREC and KDPH can be accessed through:
http://www.kydiabetes.net/improving-cardiovascular-and-diabetes-care.php

HealthCare
Kentucky Regional Extension Center

Prediabetes — Stopping the Runaway Train!

Green County HOSA Teens Win State Award For Prediabetes Awareness

Submitted by: Lindi Compton, HOSA PSA Team, Green County High School

When you think of the bluegrass state of Kentucky, what comes to mind?

Kentucky is known for some of the nation's best college basketball, the Kentucky Derby, or we may even be known for our southern hospitality! Kentucky has lots of great qualities, although there are some that we are not proud of. As of 2017, Kentucky had the 7th highest obesity rate in the nation *(Adult Obesity in the United States)*. This is a concern because obesity is a leading factor in **prediabetes**. Unfortunately, most Kentuckians are not even aware of this silent epidemic.

Green County HOSA Public Service Announcement (PSA) Team Members, pictured above left to right, include: Morgan Hadley, Lindi Compton, McKynzee Gumm and Clark Church.

Prediabetes is silently sneaking up on Americans today. According to the American Diabetes Association over 84 million people have **prediabetes** and surprisingly 90% of these people don't even realize they have it (*Statistics About Diabetes*). This silent condition will advance to type 2 diabetes if left undetected. There are over 1.5 million Americans diagnosed with diabetes every year according to the Centers of Disease Control (*Diabetes Home*). Diabetes causes many health problems and even death without proper medical management.

HOSA - Future Health Professionals has numerous competitions enabling students to raise awareness for multiple health care conditions across the nation. HOSA is a student led organization for individuals interested in pursuing a career in health care and gives students the opportunity to make a difference in the community. Each small change will educate individuals to make changes that will produce a healthier America. Our local Green County Applied Technology Center (ATC) HOSA Chapter participates in many different community service activities and awareness projects throughout the year.

Our Public Service Announcement (PSA) team was very interested in the ***HOSA Public Service Announcement*** competition to create a PSA based on the international topic, ***Prediabetes: Stopping a Runaway Train***. Within the guidelines, students were given 30 seconds to inform others about **prediabetes** and the dangers it can cause.

Our PSA focused on the unhealthy lifestyle of one character, but then displayed the changes that could be made to prevent this terrible disease. We brought attention to the fact that it is never too late to start making healthy lifestyle changes. These subtle changes, such as, eating a healthy diet, getting at least 30 minutes of exercise daily, and visiting the doctor regularly, could help prevent type 2 diabetes.

Upon arrival to HOSA State Leadership, the Green County ATC Team presented the PSA in round one to the team of judges, then later advanced to round two, where the team presented a four minute presentation explaining the project and how it impacted the community. Members of our PSA Team included: Clark Church, McKynzee Gumm, Morgan Hadley, and myself, Lindi Compton. I knew this would be the perfect competition for our team as this would allow for creativity and teamwork skills.

Researching **prediabetes** has helped open our eyes to the possibility that we too could develop **prediabetes** leading to the life altering condition of type 2 diabetes. We understand how powerful social media is and how it can positively or negatively impact the youth in our world. Our PSA was shown throughout our community on many platforms, such as: our HOSA Facebook, Instagram, Twitter, YouTube, our school webpage and our local TV channel. In less than 24 hours we had more than 1,000 views and had also received positive feedback from people in our hometown. We are also grateful for the help from our local diabetes educator at our local health department as well as the positive encouragement and support from the Kentucky Diabetes Network for support with our project. **We were very excited upon completion of our project that our hard work gained us recognition as first place in Kentucky in the PSA event at the HOSA State Leadership Conference which was held in March 2018.**

Kentuckians can make subtle lifestyle changes that will prevent **prediabetes** and further illness. Our team plans to continue to edit our PSA and make changes to make it more impactful prior to attending the HOSA- International Leadership Conference in June 2018. It is our hope that our local HOSA PSA team has and will positively impact our community into making simple lifestyle changes in our daily lives. While these changes may seem small, they make a huge difference in overall health.

It is not too late — Kentucky can be known as one of the healthiest states in our great nation!

Help us raise awareness about PREDIABETES and stop this runaway train in its tracks!

KENTUCKY DIABETES TRENDS

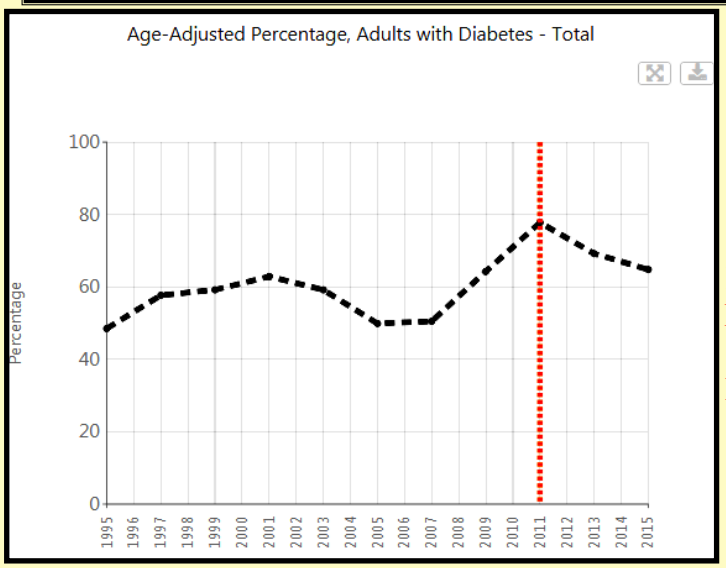
RISK FACTORS FOR COMPLICATIONS

The *Kentucky Diabetes TRENDS* column is an ongoing feature of this publication taken from the Centers for Disease Control and Prevention (CDC), Behavioral Risk Factor Surveillance System (BRFSS). This BRFSS data, submitted to the CDC, is collected by the Kentucky Department for Public Health's Kentucky BRFSS Program in cooperation with the University of Kentucky.

Diabetes trend data may be used by organizations to identify strengths and weaknesses in Kentucky's diabetes care practices. Trends which show poor results may be targeted to develop collaborative plans to improve Kentucky's diabetes outcomes.

Watch this newsletter for the future *KENTUCKY DIABETES TRENDS* series.

HYPERTENSION AWARENESS



Vertical dotted line indicates major changes made to the survey methods in 2011.

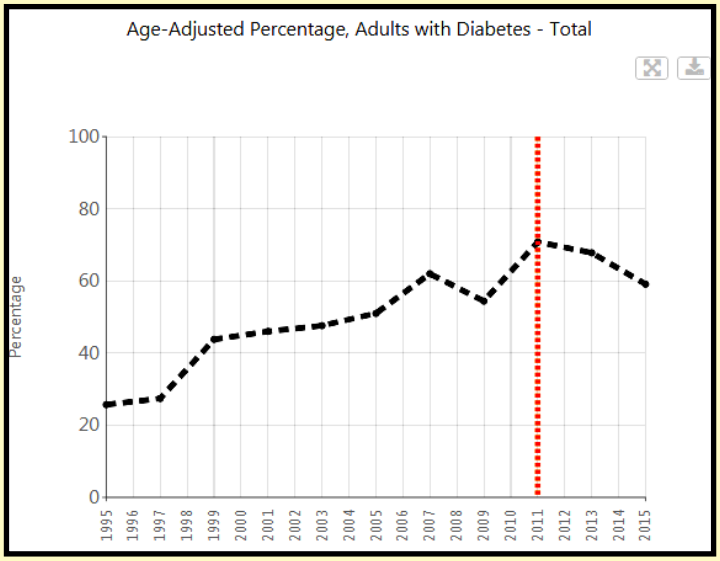
Some Improvement Noted:

64.8% Adult Kentuckians With Diabetes Reported Being Told They Had Hypertension *(2015)*.

Age-Adjusted Percentage Adults With Diabetes	
Year	**Percentage**
2004	*
2005	49.9
2006	*
2007	50.5
2008	*
2009	64.3
2010	*
2011	77.8
2012	*
2013	69.2
2014	*
2015	64.8

To access the complete data for cumulative years shown in graph: https://gis.cdc.gov/grasp/diabetes/diabetesatlas.html

HIGH CHOLESTEROL AWARENESS



Vertical dotted line indicates major changes made to the survey methods in 2011.
Horizontal dotted line indicates "No Data", "Suppressed Data", or both.

Some Improvement Noted:

59.1% Adult Kentuckians With Diabetes Reported Being Told They Had High Cholesterol Levels *(2015)*.

Age-Adjusted Percentage Adults With Diabetes	
Year	**Percentage**
2004	*
2005	51.0
2006	*
2007	62.0
2008	*
2009	54.4
2010	*
2011	70.8
2012	*
2013	67.8
2014	*
2015	59.1

To access the complete data for cumulative years shown in graph: http://gis.cdc.gov/grasp/diabetes/diabetesatlas.html

THINK OUTSIDE THE PILLBOX:
ASSESS AND ADDRESS MEDICATION ADHERENCE

Lourdes Cross

Submitted by: Lourdes Cross, PharmD, BCACP, CDE, Sullivan University College of Pharmacy, University of Louisville Hospital, Louisville, KY

To help with the increasing prevalence of diabetes in the United States, several medication options are now available. However, approximately half of patients with type 2 diabetes fail to achieve glycemic control. One of the factors contributing to poor outcomes is medication nonadherence. **It is estimated that only 50% of patients take their medications as prescribed.** Poor medication adherence can contribute to increased morbidity, mortality, healthcare costs, emergency room visits, and hospitalizations. Therefore, it is important to recognize and minimize factors that may reduce medication adherence.

Identify or Predict Adherence

In one study, up to 61% of patients stated they rarely or never discussed medication adherence with their physicians, and 67% of physicians reported being unaware of how often their patients missed a dose of medication. Asking the right question can reveal if a patient is adherent. Consider asking the patient these open-ended questions:

- How often do you have difficulty remembering to take all your medications?
- Taking medications can be inconvenient. How often do you feel bothered about taking medications?

Another method to assess adherence is to retrieve electronic pharmacy data to identify refill frequency. However, this does not always ensure that the patient is actually taking the medication. Some tools have been developed to predict medication adherence. ***The Medication Adherence Questionnaire*** and ***Morisky Medication Adherence Scale*** use patient-reported measures to assess medication-taking behaviors and rank the degree of adherence. Ultimately, increasing trust and communication between the health care provider and patient will improve the identification of medication nonadherence.

Barriers and Solutions

Patient Knowledge

It can be challenging for patients to take a medication when they do not understand why it is prescribed or how to use it. Other patients want to reduce the potential for side effects and/or test the lowest possible dose that will be effective for them. Up to 35% of English-speaking, Medicare-enrolled patients demonstrated "inadequate" health literacy, defined as the ability to read and understand health information (eg, medication instructions). A meta-analysis study found that patients are 2.16 times more likely to stay adherent to medications if their physician communicates with them effectively. Table 1 reviews some strategies to help improve patient education and overall adherence.

Regimen Complexity

As the number of medications prescribed and dosing frequency increases, low adherence becomes a growing

Table 1. Barriers and Solutions for Medication Adherence

Patient Knowledge	1. Utilize motivational interviewing 2. Ask patients what they know and fill in knowledge gaps 3. Discuss medication effect onset (eg, pioglitazone's peak effect is several weeks) 4. Provide clear, written instructions (eg, use visual aids such as a Pill Card: https://www.ahrq.gov/patients-consumers/diagnosis-treatment/treatments/pillcard) 5. Use the teach back method
Regimen Complexity	1. Discontinue unnecessary medications (eg, drugs treating side effects) and switch the offending agent 2. Use once-daily or long-acting formulations (eg, once weekly GLP-1 receptor agonist) 3. Utilize combination products (eg, metformin/sitagliptin, metformin/empagliflozin)
Financial Burden	1. Review insurance formularies (Kentucky Medicaid preferred drug lists: http://chfs.ky.gov/dms/Pharmacy.htm#pdl) 2. Use free or low-cost medications (eg, Meijer supplies metformin immediate-release for free and some pharmacies may price match, Walmart sells insulin [R, N, 70/30] for ~$25) 3. Utilize 90-day medication supplies
Unintentional Behavior	1. Coordinate with daily activities (eg, placing medications next to coffee maker) 2. Send text message reminders (eg, OnTimeRx, RememberItNow) 3. Download phone applications (eg, Care4Today, Medisafe, Mango Health) 4. Ask about pharmacy-generated refill reminders or phone calls 5. Provide written reminders for prescriptions sent electronically

Think Outside the Pillbox
(Continued)

concern. Strategies to overcome this barrier include eliminating unnecessary medications, prescribing combination products, and utilizing once-daily regimens. In one study, the adherence rates compared to once-daily regimens for 2-times, 3-times, and 4-times daily regimens were -6.7%, -13.5%, and -19.2%, respectively. Moreover, using combination medications allows patients to decrease pill burden while benefitting from a single copayment.

Financial Burden

A major reason why patients do not take medications as prescribed is cost. Consider insurance formularies, generic formulations, and 90-day supplies to help reduce costs. However, one study showed that patients who pay nothing for medications improve their adherence by only 4-6%. Therefore, there are likely multiple factors that affect adherence beyond financial barriers.

Unintentional Behavior

Unintentional nonadherence may be due to forgetting to take a medication, never picking up a medication, and physical inability (eg, poor vision or dexterity impairing the ability to inject medications or open pill bottles). Forgetfulness tends to be the most commonly reported reason for nonadherence. Text message reminders have been shown to improve the odds of medication adherence by 2.11 times, increasing baseline adherence rates from 50% to 67.8%. There are also free phone apps, such as ***Care4Today*** and ***Medisafe***, to help patients track and remember to take their medications. Written reminders for prescriptions sent electronically may also help, considering that 22% of e-prescriptions are never filled.

Conclusion

"Drugs don't work in patients who don't take them."
U.S. Surgeon General C. Everett Koop

U.S. Surgeon General C. Everett Koop once stated, "Drugs don't work in patients who don't take them." Given the benefits of improved health outcomes with medication administration, it is important to utilize multiple strategies to improve patient adherence. Four key areas to review include patient knowledge, regimen complexity, financial burden, and unintentional behavior.

A bibliography may be requested at: LVCross@sullivan.edu. In the subject line of the email, please state: Bibliography for Think Outside the Pillbox.

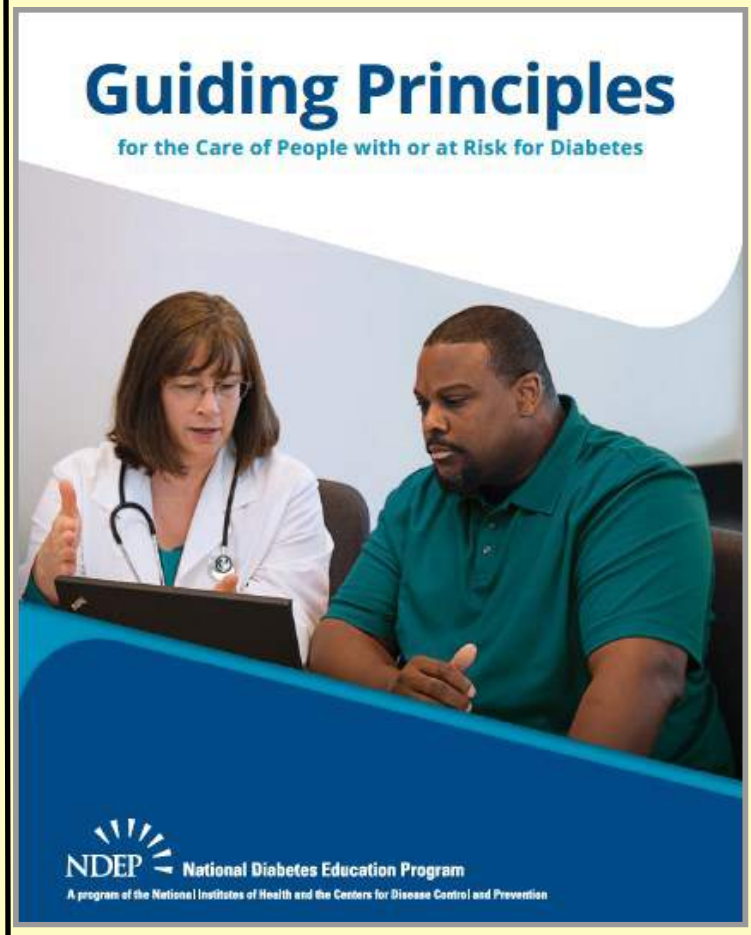
NEW GUIDING PRINCIPLES
For the Care of People With or at Risk for Diabetes

The National Diabetes Education Program (NDEP) recently updated the *Guiding Principles for the Care of People With or at Risk for Diabetes*.

These Guiding Principles aim to identify and synthesize areas of general agreement among existing guidelines to help guide primary care providers and health care teams to deliver quality care to adults with or at risk for diabetes.

Updated in August 2018, the current version reflects new and changing evidence that has evolved over the last several years, including:

- Emphasis on the importance of diabetes self-management education and support, and of providing patient-centered care using shared decision-making and individualized care.
- Development of a new Principle # 6 ***Address Overweight and Obesity in the Management of Diabetes***.



The new *Guiding Principles* may be downloaded at: **https://www.niddk.nih.gov/health-information/communication-programs/ndep/health-professionals/guiding-principles-care-people-risk-diabetes**

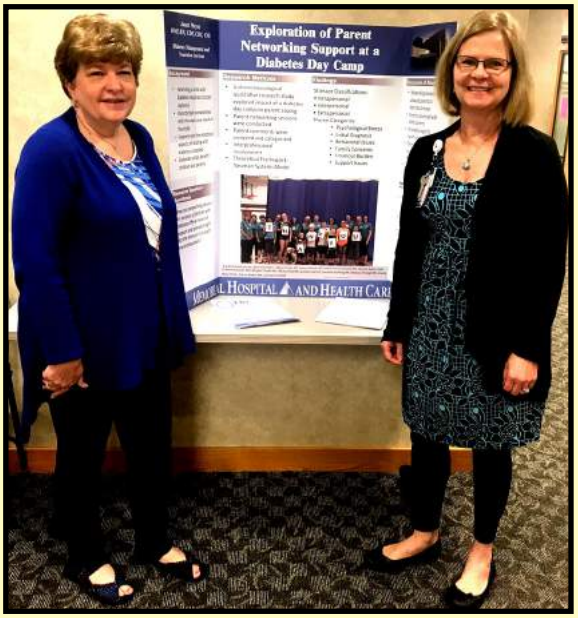
KENTUCKY COORDINATING BODY (CB)

DECA — DIABETES EDUCATORS CINCINNATI AREA • GLADE — GREATER LOUISVILLE ASSOCIATION OF DIABETES EDUCATORS
KADE — KENTUCKY ASSOCIATION OF DIABETES EDUCATORS • TRADE — TRI-STATE ASSOCIATION OF DIABETES EDUCATORS

Merritt Bates-Thomas, the Kentucky Coordinating Body (CB) Volunteer Leader, pictured on the left, and Diane Ballard, the Kentucky CB Volunteer Leader Elect, pictured on the right, represented Kentucky at the American Association of Diabetes Educators (AADE) leadership training on January 12-13, 2018 in Chicago.

Merritt is part of the Tri-State Association of Diabetes Educators (TRADE) Local Networking Group (LNG) while Diane is part of the Kentucky Association of Diabetes Educators (KADE) Local Networking Group (LNG).

On March 16, 2018, the Kentucky Statewide Diabetes Symposium Committee members presented the Kentucky Diabetes Network (KDN) with a $3500 check to be dispersed for educational endeavors among KDN, the Kentucky Coordinating Body (KY CB) and each Local Networking Group (LNG). Committee members, pictured above left to right, included: Kim Jackson, Janice Haile, John Bunton, Julie Shapero, Merritt Bates-Thomas, and Janey Wendschlag.



Dr. Janet Meyer, pictured above on the right, talked with Karen Hill, pictured on the left, about her research project entitled, "Exploration of Parent Networking Support at a Diabetes Day Camp" at the Tri-State Association of Diabetes Educators (TRADE) meeting held at the Medical Arts Building in Jasper, Indiana on April 19, 2018.

Betty Bryan, pictured above on the left, the Kentucky CB Public Policy Representative, attended the American Association of Diabetes Educators (AADE) Public Policy Forum held at the Hilton Rosemont/Chicago O'Hare on June 8-9, 2018. The entire AADE Public Policy Attendee Group, including Betty, is pictured above on the right.

New AADE Practice Papers

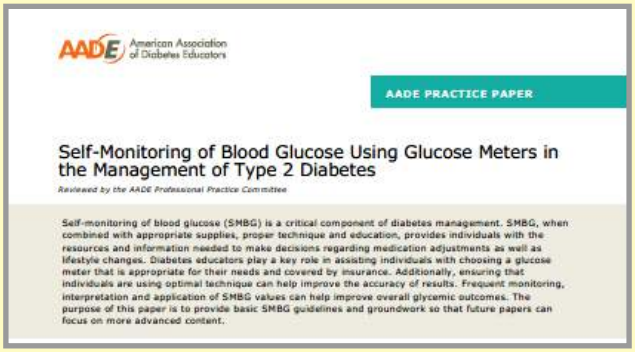
Blood Glucose Self-Monitoring and Insulin Pump Resources

The American Association of Diabetes Educators (AADE's) Professional Practice Committee has developed a new practice paper:
Self-Monitoring of Blood Glucose (SMBG) Using Glucose Meters in the Management of Type 2 Diabetes.

Practice paper highlights include:

1. How diabetes educators can help people with diabetes choose an appropriate meter;
2. How to use meters and determine when to check blood sugar based on recommendations, medications, and treatment plans;
3. How to use the results to make tweaks in eating plans, exercise habits, medication timing and dosages, problem solving, stress reduction and more.

Check out the new SMBG hub for additional resources including tip sheets on monitoring for people living with diabetes, advocacy resources related to the ***Competitive Bidding Program*** and seniors' access to the supplies they need. Educational courses, including 5.5 hours of free Continuing Education (CE) focused on blood glucose monitoring, are also available.



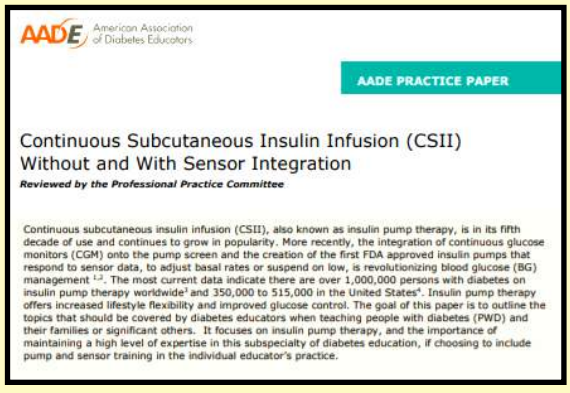
Check out the NEW PRACTICE PAPER and other resources at: https://www.diabeteseducator.org/practice/educator-tools/self-monitoring-of-blood-glucose.

The American Association of Diabetes Educators (AADE's) Professional Practice Committee also released a new practice paper:
***Insulin Pump Therapy With and Without Sensor Integration*. This practice paper offers guidance on working with individuals who want to initiate pump therapy.**

Practice paper highlights include:

1. Assessment for Insulin Pump Therapy
2. Pump and Infusion Set Selection
3. Pump Selection Criteria
4. Pump Start
5. Education and Management
    - Safe Practices
    - Troubleshooting and Problem Solving
    - School and Day Care Settings
    - Continuous Glucose Monitors with Insulin Pumps
    - Travel
    - Exercise
    - Medical Procedures
    - Hospitalization

Download the insulin pump practice paper at: https://www.diabeteseducator.org/docs/default-source/practice/practice-documents/practice-papers/continuous-subcutaneous-insulin-infusion-2018.pdf?sfvrsn=2.



Download a variety of related AADE resources, including tip sheets, journal articles and commentary from one of the authors at: https://www.diabeteseducator.org/practice/educator-tools/ipt-resources.

SEMAGLUTIDE — NEW GLP-1 AGONIST

Brooke Hudspeth

Submitted by: Brooke Hudspeth, PharmD, CDE, Director of Diabetes Prevention, Kroger Pharmacy and Elizabeth Elliott, PharmD, Postgraduate Residency through the University of Kentucky and Kroger Pharmacy

Elizabeth Elliott

Introduction

Glucagon-like peptide-1 receptor agonists (GLP-1 agonists) have been used as adjuncts to diet and exercise to improve glycemic control in adults with type 2 diabetes since Byetta (Exenatide) was introduced into market in 2005. GLP-1 agonists mimic the effects of the incretin hormone GLP-1. The activation of GLP-1 increases insulin secretion in response to ingestion of food as well as suppresses glucagon release, delays gastric emptying, and increases satiety. In patients with type 2 diabetes mellitus (T2DM) the incretin effect is often diminished, thus contributing to hyperglycemia. GLP-1 agonists have not only shown improvement in blood glucose control, but have also proven to be beneficial in weight management. With the approval of semaglutide on December 5, 2017, there are now seven injectable GLP-1 agonists approved by the US Food and Drug Administration (FDA):

Short-acting	Long-acting
Exenatide (Byetta) → Dosed twice daily	Exenatide ER (Bydureon) → Dosed once weekly
Liraglutide (Victoza) → Dosed once daily	Albiglutide (Tanzeum) → Dosed once weekly
Lixisenatide (Adlyxin) → Dosed once daily	Dulaglutide (Trulicity) → Dosed Once Weekly
	Semaglutide (Ozempic) → Dosed Once Weekly

Produced from the labs of Novo Nordisk, semaglutide (Ozempic®) is an analog of native human GLP-1 that is similar to the short-acting liraglutide. However, when compared to liraglutide, semaglutide is more resistant to degradation by the Dipeptidyl peptidase-4 (DPP-4) enzyme due to its high albumin binding. This results in a longer half-life of approximately one week.[1]

The Data

The recommendation for approval of semaglutide came as a result of data from the SUSTAIN clinical program. This phase 3a clinical trial program consisted of eight global trials, including a two-year cardiovascular outcomes trail, and involved more than 8000 adults with type 2 diabetes mellitus, including those at high risk for cardiovascular disease.[1]

References: ***Available upon request by contacting Brooke Hudspeth at brooke.hudspeth@kroger.com.***

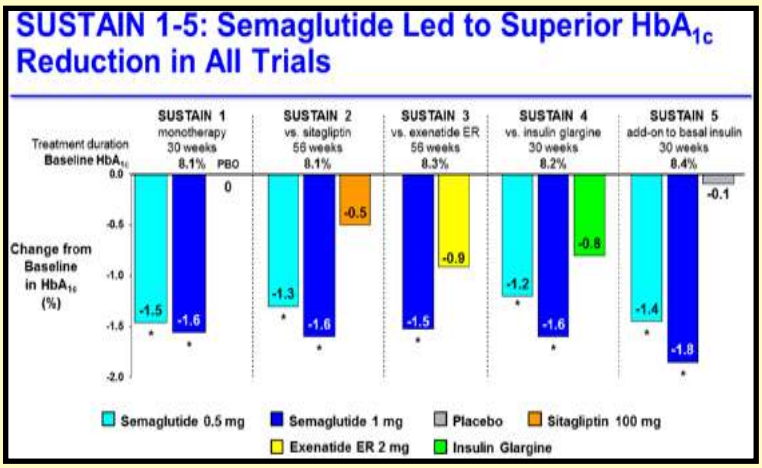


Figure 1: Semaglutide Led to Superior HbA1c Reduction in All Trials

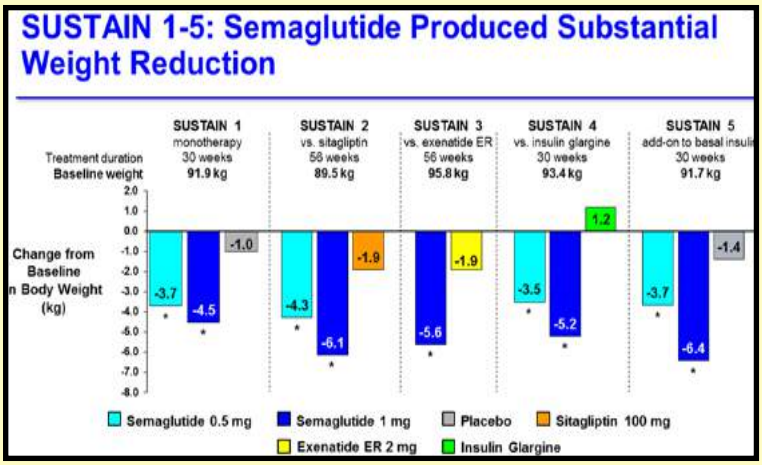


Figure 2: Semaglutide Produced Substantial Weight Reduction

SUSTAIN 1: A1C Reduction and Weight Loss

This double-blind, randomized study evaluated both the efficacy and safety of semaglutide monotherapy compared to placebo in patients with type 2 diabetes. A once-weekly injection of semaglutide at doses of 0.5 and 1.0 milligrams was compared to placebo in treatment naïve patients with type 2 diabetes. The primary endpoint was the change in mean HBA1c concentrations from baseline to week 30 in both arms, and the secondary endpoint was change in mean body weight from baseline to week 30. This trial showed a statistically significant decrease in both A1c and weight in the 0.5mg and 1mg semaglutide groups compared to placebo. HBA1c reduction at 30 weeks was 1.45% and 1.55% for the 0.5mg and 1mg semaglutide groups, respectively. Weight loss was 3.73 kgs and 4.53 kgs in the 0.5mg and the 1mg groups, respectively. This study showed that most adverse events in the semaglutide group were gastrointestinal in nature with most reports being associated with nausea. Overall, regardless of the dose given, semaglutide was associated with better glycemic control and weight reduction in treatment naïve patients when compared to placebo. [2]

SUSTAIN 6: Cardiovascular Outcomes

Cardiovascular disease is the leading cause of morbidity and mortality in patients with diabetes. Along with common comorbid conditions that can increase risk for cardiovascular disease such as

SEMAGLUTIDE *(CONTINUED)*

dyslipidemia and hypertension, diabetes itself confers independent risk for cardiovascular disease. As such, regulatory guidance has identified the need to establish cardiovascular safety of new therapies for T2DM. Furthermore, identifying therapies that can reduce cardiovascular risk could prove to be extremely beneficial in patients with T2DM. The SUSTAIN-6 trial was a randomized, double-blind, placebo-controlled, parallel-group trial designed to assess the non-inferiority of semaglutide to placebo in regards to cardiovascular safety in patients with T2DM. Patients were randomized to receive either 0.5 mg or 1.0 mg of once-weekly subcutaneous semaglutide or placebo. To be included, patients had to be at least 50 years of age with established cardiovascular disease, chronic heart failure, or chronic kidney disease, or at least 60 years of age with at least one cardiovascular risk factor. The primary outcome was the first occurrence of death from cardiovascular causes. The primary outcome occurred in 108 out of 1648 patients (6.6%) in the group that received semaglutide and 146 out of 1649 patients (8.9%) in the group that received placebo. In conclusion, among patients with type 2 diabetes at high cardiovascular risk, the rate of first occurrence of death from cardiovascular causes, nonfatal myocardial infarction, or nonfatal stroke was significantly lower in those receiving semaglutide than in those receiving placebo, which confirmed noninferiority. [3]

Semaglutide on Postprandial Glucose and Lipid Metabolism

A single center, randomized double-blind study was conducted to assess the effects of semaglutide on postprandial glucose and lipid metabolism. The participants were randomized to receive either semaglutide first and placebo second or vice versa with a 5 week washout period and each treatment period lasting 12 weeks. This study showed that after a standard carbohydrate rich breakfast, the semaglutide post prandial increments for glucose were 38.5% lower with semaglutide compared with placebo. For lipid metabolism this study showed that fasting total cholesterol and HDL cholesterol were lower with semaglutide compared with placebo.[4]

How Supplied

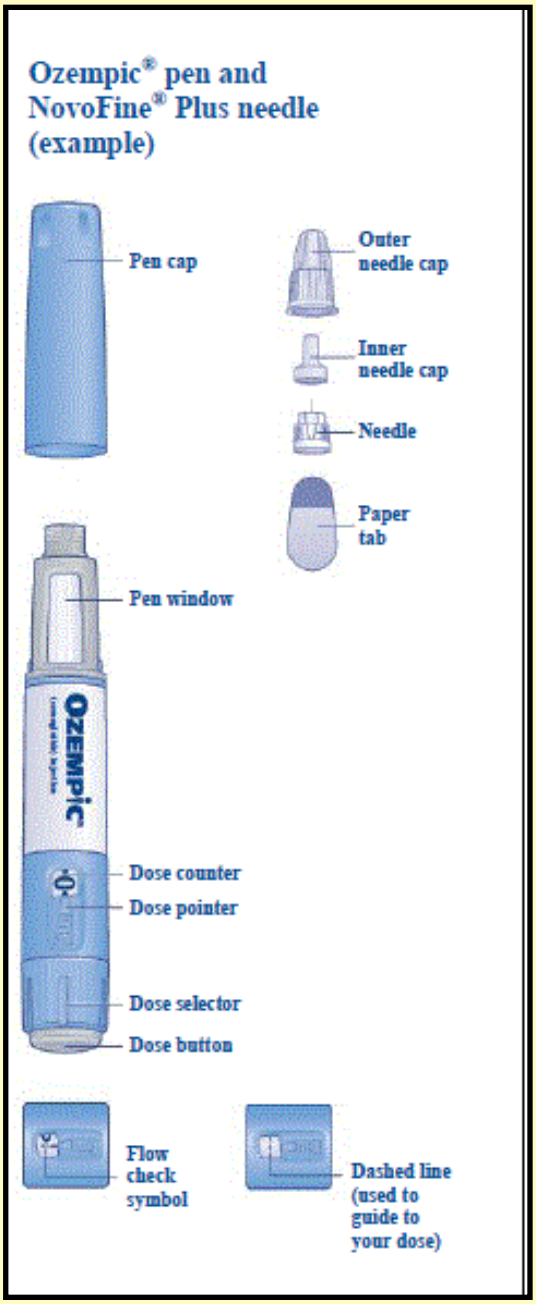
Patients will administer semaglutide using pre-filled pens with FlexTouch technology. These pens will be supplied as either a 1-pen pack supply with 4 weekly doses of 0.5 mg or a 2-pen pack that supplies 4 weekly doses of 1.0 mg.

Oral Semaglutide

Novo Nordisk is currently conducting Phase 3 trials on an oral formulation of semaglutide. This first oral GLP-1 agonist combines semaglutide with an enhancer, sodium N-[8 (2-hydroxylbenzoyl) amino] caprylate (SNAC). SNAC, when formulated with semaglutide and ingested, will cause a localized increase in pH and leads to higher solubility and protection against degradation enzymes.[5]

Conclusion

Due to these positive effects on glucose and weight, GLP-1 agonists continue to be a mainstay in therapy for patients with type 2 diabetes. We have seen many advancements with these medications, from once-weekly dosing options to cardiovascular protective effects. With new GLP-1 agonists on the horizon, such as oral semaglutide, this class shows even more promise for patients with type 2 diabetes.



Ozempic pen and needle example pictured above.

Tina Claypool

Medication articles oversight by Tina Claypool, PharmD, CDE, Clinical Pharmacy Specialist, Ambulatory Care at University of Louisville Hospital, Outpatient Center Pharmacy, Louisville, KY

New Rapid Acting Insulin

Brooke Hudspeth

Submitted by: Brooke Hudspeth, PharmD, CDE, Director of Diabetes Prevention, Kroger Pharmacy and Elizabeth Elliott, PharmD, Postgraduate Residency through the University of Kentucky and Kroger Pharmacy

Elizabeth Elliott

Insulin is a mainstay in therapy for patients with both type 1 and type 2 diabetes. For those with type 1 diabetes, insulin therapy is required to manage the disease, and for those with type 2 diabetes, insulin therapy is beneficial in patients requiring tighter glycemic control. While insulin can have the greatest impact on lowering A1c and mimicking a natural insulin release, it also carries the highest risk of hypoglycemia. Therefore, the timing of insulin administration is critically important to help reduce the incidence of hypoglycemia. In choosing an insulin regimen, the goal is to mimic as closely as possible the endogenous insulin release. One of the most common insulin regimens is a basal-bolus regimen, consisting of a long-acting insulin coupled with a short or rapid-acting insulin. The long-acting insulin mimics the body's basal insulin release and the short or rapid-acting insulin mimics the body's bolus insulin release, which is the insulin that is released upon eating.

Long-Acting Insulins	Onset of Action	Duration
Glargine (Lantus®)	1-2 hours	~24 hours
Detemir (Levemir®)	1-2 hours	~24 hours
Degludec (Tresiba®)	1-2 hours	
Short-acting Insulins	**Onset of Action**	**Duration**
Regular Insulin (Humulin-R®, Novolin-R®)	30 minutes to 1 hour	5-7 hours
Rapid-acting Insulin	**Onset of Action**	**Duration**
Lispro (Humalog®) Glulisine (Apidra®) Aspart (Novolog®)	5-15 minutes	3-4 hours
Aspart (Fiasp®)	2.5 minutes	

Table Shows Available Long-acting and Short-acting Insulins. [1]

The newest approved rapid-acting insulin is Fiasp® (aspart). Fiasp® (aspart) is similar to Novolog®(aspart), however, Fiasp® (aspart) has a faster onset of action due to structural changes. Fiasp® (aspart) can be administered at the start of the meal or within 20 minutes after starting a meal. This faster-acting insulin, therefore, more closely mimics the body's natural insulin response to food and, in turn, leads to tighter post-prandial glycemic control. Fiasp® (aspart) is ideal for patients with irregular eating patterns, due to the ability to administer after the start of their meal. [3]

Fiasp Duration of Action

Fiasp® (aspart) was especially designed to produce a faster onset of action compared to other rapid-acting insulins. Fiasp® (aspart) is insulin aspart formulated with nicacinamide and the amino acid L-arginine. The nicacinamide allows for faster absorption and the addition of the amino acid leads to stabilization of the molecule.[3]

Dosage Forms

Fiasp® (aspart) is available in a concentration of 100 units per milliliter (U-100) and comes as either a 10 ml multiple-dose vial or a 3 ml single-patient-use FlexTouch pen.[3]

Dosing

The dose of Fiasp® (aspart) is individualized based on patient needs and the level of control of the current basal-bolus regimen. Dose adjustments may be needed depending on the meal type that will be ingested and/or the level of post-prandial blood glucose control. Fiasp® (aspart) can be injected in either the abdomen, upper arm, or thigh.

Storage

Fiasp® (aspart) should be stored between 2-8°C (35.6-46.4°F) before use. Once in use, Fiasp® (aspart) expires within 28 days. Fiasp® (aspart) should not be frozen, nor should it be used if it has been frozen. If Fiasp® (aspart) is cloudy or does not appear to be clear then it should not be used. The Flextouch pen in the carton should be kept away and protected from light.

Adverse Reactions

The most common adverse reactions are similar to other insulin therapies. These adverse reactions include hypoglycemia, hypokalemia, and hypersensitivity and allergic reactions.[3]

Clinical Trials

Fiasps® (aspart) approval is based on the ONSET trial program which encompasses 4 clinical trials that assess efficacy and safety, as well as pump compatibility. These studies consist of both completed and ongoing trials.

The efficacy and safety of Fiasp® (aspart) was studied in ONSET trials 1 and 2. In both of these trials the researchers evaluated the efficacy of faster insulin aspart (Fiasp®) as compared to conventional insulin aspart (Novolog®), however, ONSET 1 focused on type 1 diabetes and ONSET 2 focused on type 2 diabetes. The primary endpoint for both trials was change in HbA1c after 26 weeks of treatment. In both trials faster insulin aspart (Fiasp®) demonstrated non-inferiority to conventional insulin aspart (Novolog®). These trials showed that the rate of hypoglycemia was similar between faster insulin aspart (Fiasp®) and conventional insulin aspart (Novolog®).

The ONSET 3 trial looked at the superiority of glycemic control of faster insulin aspart (Fiasp®) in a basal-bolus regimen compared to a basal-only regimen. They concluded that there was superior glycemic control in patients using a basal-bolus regimen compared to a basal-only regimen; however, patients using the basal-bolus regimen did show an increase in hypoglycemia and weight gain.

References: ***Available upon request by contacting Brooke Hudspeth at brooke.hudspeth@kroger.com.***

Diabetes Adventure Camp Held in Henderson

Submitted by: Karen Hill, RDN, LD, Henderson County Diabetes Coalition

On Saturday, June 2, the Henderson County Diabetes Coalition (HCDC) held their 10th annual day camp for children and teens with diabetes. The camp was held at the ***Brain Injury Outdoor Adventure Camp*** in Robards, KY**.** Forty-three attendees included 8 children/teens with diabetes, 23 family members/friends and 12 volunteers.

Campers were outside most of the day doing team building exercises, zip lining, climbing ropes and various other activities. Most of the adults stayed cool indoors while they listened to guest speakers and networked with other parents. Parents learned about diabetes being a "family affair" and how to increase teamwork. In the afternoon, everyone came together to network and learn how to build their own first aid kit. Fun was had by everyone and many of the attendees said they couldn't wait until next year's camp.

Kids prepared to zip line at the Henderson Diabetes Day Camp.

Kids, parents, and friends, pictured above, participate in team building activities at the Henderson Diabetes Day Camp held in June.

Kentucky Diabetes Camp for Children Expanded to Eastern Kentucky

Megan Cooper

Adapted from submission by: Megan Cooper, Executive Director, Camp Hendon

Camp Hendon, the **Kentucky Diabetes Camp for Children**, teamed up with the Anthem Foundation to bring a life-changing summer camp program for children with Type 1 Diabetes to the eastern region of Kentucky. The Foundation's contribution of $25,000 supported Camp Hendon's growth and expansion from our current weeklong program at Camp Loucon in Leitchfield, KY to an additional week of programming at Aldersgate Camp in Ravenna, KY. The Anthem Foundation's gift to Camp Hendon is part of their Healthy Generations program, which creates partnerships with nonprofit organizations across Kentucky that are committed to creating a healthier generation of Americans.

Although there is lots of learning at camp, our kids also get to have tons of fun enjoying traditional summer camp activities such as zip lining, swimming, field games, dance nights, and more! We also have the opportunity to connect our campers with other kids going through the exact same struggle. At diabetes camp, kids aren't seen as 'the child or teen with diabetes' because at diabetes camp — they are just like everyone else. Not to mention the relief provided to parents for that one week out of the year.

About the Kentucky Diabetes Camp for Children, Inc. dba Camp Hendon

Camp Hendon is a 501(c)3 nonprofit organization. Our mission is to give children with diabetes life-changing experiences, empowering them to take control of their journey. Visit us online at **www.CampHendon.org** and connect with us on Facebook (**www.Facebook.com/camphendon**), Instagram (**@camphendonky**), and Twitter (**@camphendon**).

ADA's Insulin Affordability Campaign

Gary Dougherty

Submitted by: Gary Dougherty, Director, State Government Affairs, American Diabetes Association (ADA)

November 17, 2017 marked the one-year anniversary since the American Diabetes Association (ADA) launched our **Make Insulin Affordable** campaign. To date more than 300,000 individuals have signed the ADA's petition calling for increased transparency by all entities in the insulin supply chain and for Congress to help determine the reasons for the dramatic price increases. We continue to hear from individuals across the country who are faced with tough choices every day because they cannot afford their insulin. Insulin prices continue to rise, and the ADA is taking steps to reverse the trend.

Dr. William T. Cefalu, the ADA's Chief Scientific, Medical and Mission Officer, has convened an expert Insulin Affordability Working Group that is gathering detailed information about the issue in order to develop viable long-term solutions that can help put affordable insulin within the reach of all who need it.

Since the campaign launched, and in addition to the collection of more than 300,000 signatures on the national petition, Diabetes Advocates and ADA staff have held more than 200 meetings with members of Congress and collected more than 600 stories from patients, caregivers and providers to bolster our advocacy efforts.

In the coming months, we can expect to hear more about what the Working Group has learned about the insulin supply chain as well as the ADA's recommendations for lowering the cost of insulin.

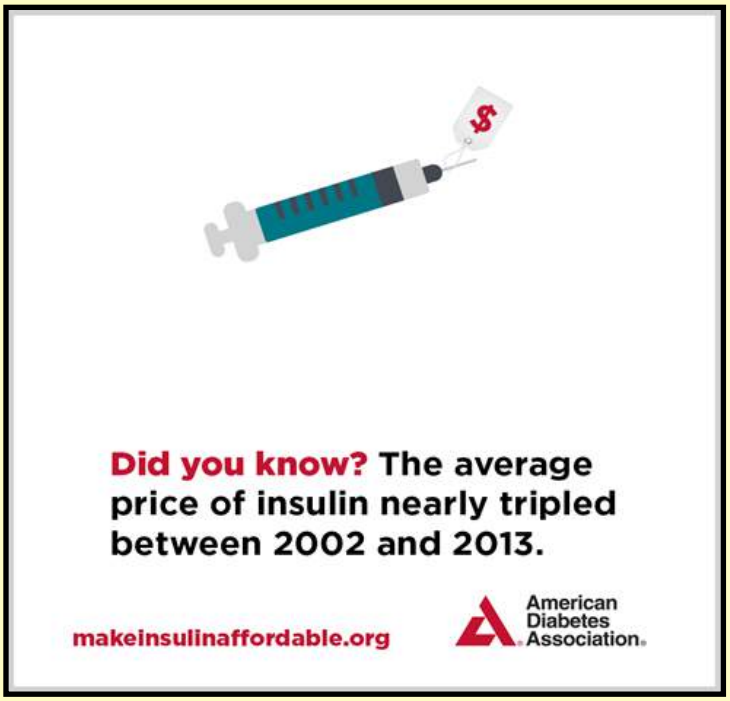
For more information, please check out Dr. Cefalu's blog post at **http://diabetesstopshere.org/2017/11/17/make-insulin-affordable-an-update-from-william-t-cefalu/** that details the anniversary of our efforts.

You can also learn more about the issue by visiting **www.makeinsulinaffordable.org**. Please consider adding your name to the petition and sharing it through your networks and on social media. The more signatures we add to the petition, the stronger our collective voice can be.

ADA Releases Insulin Affordability White Paper & Policy Recommendations

Submitted by: Gary Dougherty, Director, State Government Affairs, American Diabetes Association (ADA)

On May 8, 2018, Dr. William T. Cefalu, ADA's Chief Scientific, Medical and Mission Officer, testified before the U.S. Senate Special Committee on Aging during a hearing entitled, ***Insulin Access and Affordability: The Rising Cost of Treatment.***



ADA Insulin Access White Paper

On the same day, ADA released a white paper outlining what its Insulin Access and Affordability Working Group learned from discussions with more than 20 stakeholders throughout the insulin supply chain (pharmaceutical manufacturers, distributors, pharmacy benefit managers, pharmacies, pharmacists, health plans, employers, and people with diabetes and their caregivers) over the course of nearly a year.

Through a rigorous process that examined all levels of the insulin supply chain, the Working Group learned a lot about a very complicated and complex system. Among the Working Group's conclusions are the following:

- List prices of insulin have risen precipitously in recent years. Between 2002 and 2013 the average price of insulin nearly tripled.
- The current pricing and rebate system encourages high list prices.
- There is a lack of transparency throughout the insulin supply chain.
- Pharmacy Benefit Managers (PBMs) have substantial market

ADA's Insuli n Affordability White Paper *(Continued)*

power.
- People with diabetes are financially harmed by high list prices and high out-of-pocket costs.
- Patients' medical care can be adversely affected by formulary decisions.
- The regulatory framework for development and approval of biosimilar insulins is burdensome for manufacturers.
- Prescribing patterns have favored newer, more expensive insulins.

ADA White Paper Recommendations

Given the above conclusions, the Working Group also makes the following recommendations, as outlined in the white paper:

- Providers, pharmacies, and health plans should discuss the cost of insulin preparations with people with diabetes to help them understand the advantages, disadvantages, and financial implications of potential insulin preparations.
- Providers should prescribe the lowest price insulin required to effectively and safely achieve treatment goals.
- Cost-sharing for insured people should be based on the lowest price available.
- Uninsured people with diabetes should have access to high quality, low-cost insulins.
- Researchers should study the comparative effectiveness and cost-effectiveness of the various insulins.
- List price for insulins should more closely reflect net price, and rebates based on list price should be minimized.
- Health plans should ensure that people with diabetes can access their insulin without undue administrative burden or excessive cost.
- PBMs and payers should use rebates to lower people with diabetes' costs for insulin at the point of sale.
- There needs to be more transparency throughout the insulin supply chain.
- Payers, insurers, manufacturers, PBMs, and people with diabetes should encourage innovation in the development of more effective insulin preparations.
- The U.S. Food and Drug Administration should continue to streamline the process to bring biosimilar insulins to market.
- Organizations like the American Diabetes Association should (1) advocate for access to affordable and evidence-based insulin preparations for people with diabetes, (2) ensure that health providers receive on-going medical education on how to prescribe all insulin preparations, including human insulins, based on scientific and medical evidence, (3) develop and regularly update clinical guidelines or standards of care based on scientific evidence for prescribing all forms of insulin, and make these guidelines easily available to health care providers, and (4) make information about the advantages, disadvantages, and financial implications of all insulin preparations easily available to people with diabetes.

In follow-up to the Working Group's conclusions and recommendations, on May 24, the ADA released a public policy statement with an array of short- and long-term policy recommendations to help shed additional light on the issue and improve affordable access to insulin for people with diabetes. Recommendations include:
- Streamlining the biosimilar approval process
- Increasing pricing transparency throughout the insulin supply chain
- Lowering or removing patient cost-sharing for insulin
- Increasing access to health care coverage for all people with diabetes.

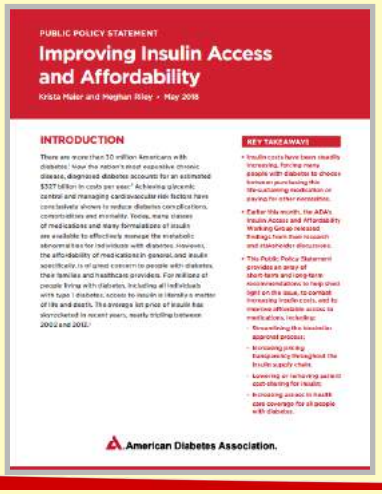
The work of the ADA and its Working Group is only a starting point. Beginning with increased transparency within the insulin supply chain, every stakeholder must work together toward a common goal—ensure affordable insulin is within reach for all who need it.

Key White Paper Resources

ADA's Insulin Affordability Petition
https://makeinsulinaffordable.org/petition/

White Paper – "*Insulin Access and Affordability Working Group: Conclusions and Recommendations*"
http://care.diabetesjournals.org/content/41/6/1299

Public Policy Statement – "*Improving Insulin Access and Affordability*"
http://www.diabetes.org/assets/pdfs/advocacy/improving-insulin-access-and.pdf

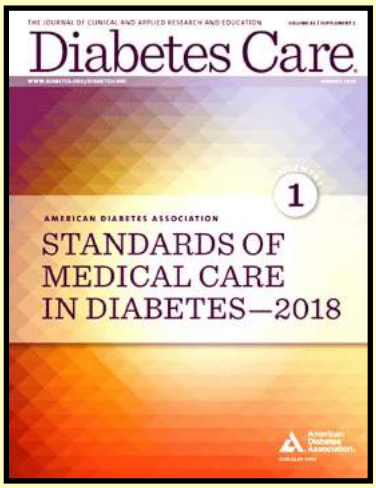


STANDARDS OF MEDICAL CARE IN DIABETES 2018:
SUMMARY OF REVISIONS

Reprinted from: *Diabetes Care 2018 Jan; 41 (Supplement 1): S1-S2.*
https://doi.org/10.2337/dc18-Sint01

General Changes

The field of diabetes care is rapidly changing as new research, technology, and treatments that can improve the health and well-being of people with diabetes continue to emerge. With annual updates since 1989, the American Diabetes Association's (ADA's) **"Standards of Medical Care in Diabetes"** ***(Standards of Care)*** has long been a leader in producing guidelines that capture the most current state of the field. Starting in 2018, the ADA will update the Standards of Care even more frequently online should the Professional Practice Committee determine that new evidence or regulatory changes merit immediate incorporation into the Standards of Care. In addition, the Standards of Care will now become the ADA's sole source of clinical practice recommendations, superseding all prior position and scientific statements. The change is intended to clarify the Association's current positions by consolidating all clinical practice recommendations into the Standards of Care. For further information on changes to the classification and definitions of ADA Standards of Care, statements, reports, and reviews, see the **"Introduction"** at **http://care.diabetesjournals.org/content/41/Supplement_1/S1**.



Although levels of evidence for several recommendations have been updated, these changes are not addressed below as the clinical recommendations have remained the same. Changes in evidence level from, for example, ***E*** *to* ***C*** *are not noted below. The 2018 Standards of Care contains, in addition to many minor changes that clarify recommendations or reflect new evidence, the following more substantive revisions.*

Section Changes

Section 1. Improving Care and Promoting Health in Populations

This section was renamed to better capture its subject matter and was reorganized for clarity.

A new recommendation was added about using reliable data metrics to assess and improve the quality of diabetes care and reduce costs. Additional discussion was included on the social determinants of health.

Text was added describing the emerging use of telemedicine in diabetes care.

Section 2. Classification and Diagnosis of Diabetes

As a result of recent evidence describing potential limitations in A1C measurements due to hemoglobin variants, assay interference, and conditions associated with red blood cell turnover, additional recommendations were added to clarify the appropriate use of the A1C test generally and in the diagnosis of diabetes in these special cases.

The recommendation for testing for prediabetes and type 2 diabetes in children and adolescents was changed, suggesting testing for youth who are overweight or obese and have one or more additional risk factors (Table 2.5).

A clarification was added that, while generally not recommended, community screening may be considered in specific situations where an adequate referral system for positive tests is established. Additional detail was added regarding current research on antihyperglycemic treatment in people with posttransplantation diabetes mellitus.

Section 3. Comprehensive Medical Evaluation and Assessment of Comorbidities

The table describing the components of a comprehensive medical evaluation (Table 3.1) was substantially redesigned and reorganized, incorporating information about the recommended frequency of the components of care at both initial and follow-up visits.

The immunization section was updated for clarity to more closely align with recommendations from the Centers for Disease Control and Prevention.

Text was added about the importance of language choice in patient-centered communication.

Pancreatitis was added to the section on comorbidities, including a new recommendation about the consideration of islet autotransplantation to prevent postsurgical diabetes in patients with medically refractory chronic pancreatitis who require total pancreatectomy.

A recommendation was added to consider checking serum testosterone in men with diabetes and signs and symptoms of hypogonadism.

Section 4. Lifestyle Management

A recommendation was modified to include individual and group settings as well as technology-based platforms for the delivery of effective diabetes self-management education and support.

Additional explanation was added to the nutrition section to clarify the ADA's recommendations that there is no universal ideal macronutrient distribution and that eating plans should be individualized.

Text was added to address the role of low-carbohydrate diets in people with diabetes.

Section 5. Prevention or Delay of Type 2 Diabetes

The recommendation regarding the use of metformin in the prevention of prediabetes was reworded to better reflect the data from the Diabetes Prevention Program.

Section 6. Glycemic Targets

Based on new data, the recommendation for the use of continuous glucose monitoring (CGM) in adults with type 1 diabetes is no longer limited to those ages 25 and above but has been expanded to all adults *(18 and above)* who are not meeting glycemic targets.

Additional text was added about a new intermittent or "flash" CGM device that was recently approved for adult use.

Details were added about new CGM devices that no longer require confirmatory self-monitoring of blood glucose for treatment decisions.

As in Section 2, this section now includes an expanded discussion of the limitations of A1C in certain populations based on the presence of hemoglobin variants, differences in red blood cell turnover rates, ethnicity, and age.

To clarify the classification of hypoglycemia, level 1 hypoglycemia was renamed "hypoglycemia alert value" from "glucose alert value."

Section 7. Obesity Management for the Treatment of Type 2 Diabetes

To provide a second set of cost information, the table of medications for the treatment of obesity (Table 7.2) was updated to include National Average Drug Acquisition Cost (NADAC) prices.

Section 8. Pharmacologic Approaches to Glycemic Treatment

New recommendations for antihyperglycemic therapy for adults with type 2 diabetes have been added to reflect recent cardiovascular outcomes trial (CVOT) data, indicating that people with atherosclerotic cardiovascular disease (ASCVD) should begin with lifestyle management and metformin and subsequently incorporate an agent proven to reduce major adverse cardiovascular events and/or cardiovascular mortality after considering drug-specific and patient factors.

The algorithm for antihyperglycemic treatment (Fig. 8.1) was updated to incorporate the new ASCVD recommendation.
A new table was added (Table 8.1) to summarize drug-specific and patient factors of antihyperglycemic agents. Figure 8.1 and Table 8.1 are meant to be used together to guide the choice of antihyperglycemic agents as part of patient–provider shared decision-making.

Table 8.2 was modified to focus on the pharmacology and mechanisms of available glucose-lowering medicines in the U.S.
To provide a second set of cost information for antihyperglycemic agents, NADAC data was added to the average wholesale prices information in Table 8.3 and Table 8.4.

Section 9. Cardiovascular Disease and Risk Management

A new recommendation was added that all hypertensive patients with diabetes should monitor their blood pressure at home to help identify masked or white coat hypertension, as well as to improve medication-taking behavior.

A new figure (Fig. 9.1) was added to illustrate the recommended antihypertensive treatment approach for adults with diabetes and hypertension.

A new table (Table 9.1) was added summarizing studies of intensive versus standard hypertension treatment strategies.

A recommendation was added to consider mineralocorticoid receptor antagonist therapy in patients with resistant hypertension.

The lipid management recommendations were modified to stratify risk based on two broad categories: those with documented ASCVD and those without.

Owing to studies suggesting similar benefits in older versus middle-aged adults, recommendations were consolidated for patients with diabetes 40–75 years and >75 years of age without ASCVD to use moderate-intensity statin.

Table 9.2 *("Recommendations for statin and combination treatment in adults with diabetes")* was updated based on the new risk stratification approach and consolidated age-groups.

To accommodate recent data on new classes of lipid-lowering medications, a recommendation was modified to provide additional guidance on adding nonstatin LDL-lowering therapies for patients with diabetes and ASCVD who have LDL cholesterol ≥70 mg/dL despite maximally tolerated statin dose.

The same recommendations were added here as in Section 8 that people with type 2 diabetes and ASCVD should begin with lifestyle management and metformin and subsequently incorporate an agent proven to reduce major adverse cardiovascular events and/or cardiovascular mortality after considering drug-specific and patient factors.

The text was substantially modified to describe CVOT data on new diabetes agents and outcomes in people with type 2 diabetes, providing support for the new ASCVD recommendations.
A new Table 9.4 was added to summarize the CVOT studies.

Section 10. Microvascular Complications and Foot Care

A new table was added (Table 10.1), replacing previous tables 10.1 and 10.2, that combines information on staging chronic kidney disease and the appropriate kidney-related care for each stage.
A new Table 10.2 was included describing the complications of chronic kidney disease and related medical and laboratory evaluations.

A new section on acute kidney injury was included.
The effect of specific glucose-lowering medications on the delay and progression of kidney disease was discussed, with reference to recent CVOT trials that examined kidney effects as secondary outcomes.
A new recommendation was added on the noninferiority of the anti–vascular endothelial growth factor treatment ranibizumab in reducing the risk of vision loss in patients with proliferative diabetic retinopathy when compared with the traditional standard treatment, panretinal laser photocoagulation therapy.

A new section was added describing the mixed evidence on the use of hyperbaric oxygen therapy in people with diabetic foot ulcers.

Section 11. Older Adults

Three new recommendations were added to highlight the importance of individualizing pharmacologic therapy in older adults to reduce the risk of hypoglycemia, avoid overtreatment, and simplify complex regimens if possible while maintaining the A1C target.

Section 12. Children and Adolescents

To make the section more comprehensive and to reflect emerging data on diabetes technologies, additional recommendations were added on the treatment of type 1 diabetes in children and adolescents regarding intensive insulin regimens, self-monitoring of blood glucose, CGM, and automated insulin delivery systems.

The recommended risk-based timing of celiac disease screenings for youth and adolescents with type 1 diabetes was defined.

A recommendation regarding estimating glomerular filtration rate was removed because of the poor performance of the estimating equation in youth.

The type 2 diabetes in children section was substantially expanded, with several new recommendations, based on a recent ADA review.

Section 13. Management of Diabetes in Pregnancy

A recommendation was added to emphasize that insulin is the preferred agent for the management of type 1 and type 2 diabetes in pregnancy.

Based on new evidence, a recommendation was added for women with type 1 and type 2 diabetes to take low-dose aspirin starting at the end of the first trimester to lower the risk of preeclampsia.

Section 14. Diabetes Care in the Hospital

Insulin degludec was added to the insulin dosing for enteral/parenteral feedings (Table 14.1).

CMS Announces New Webpage and Helpdesk

CMS.gov
Centers for Medicare & Medicaid Services

The Center for Medicare Services (CMS) recently announced a new *Diabetes Self-Management Training (DSMT) Accreditation Program Webpage and Helpdesk.*

Medicare covers Diabetes Self-Management Training (DSMT) services furnished to beneficiaries with diabetes by certified providers.

Visit the new *DSMT Accreditation Program Webpage* for information on the certification process and accrediting organizations at:
https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/DSMT-Accreditation-Program.html.

The new helpdesk may be contacted at:
DSMTAccreditations@cms.hhs.gov .

NEW Provider Compliance for Diabetes Shoes

CMS
CENTERS FOR MEDICARE & MEDICAID SERVICES

The Centers for Medicare and Medicaid Services (CMS) released a NEW *Provider Compliance Tips for Diabetes Shoes Fact Sheet.*

Includes:

- **Improper payment rates for diabetes shoes**
- **How to prevent claim denials**
- **Type of order needed to submit a claim**

Download at:
https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/ProviderComplianceTipsforDiabeticShoes-ICN909471Print-Friendly.pdf

KDN Toolbox
New and Updated Resources

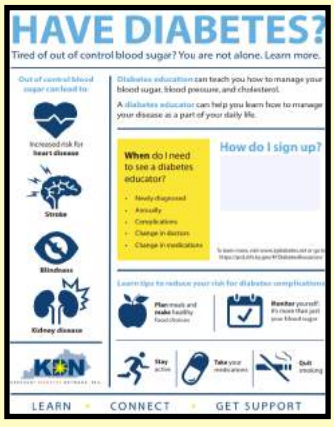
The Kentucky Diabetes Network (KDN) recently added new and updated diabetes infographics to their online Toolbox to help promote Diabetes Self-Management Education and Support (DSMES).

IMPROVE DIABETES OUTCOMES *(NEW)*

This infographic provides information for providers about the importance of diabetes self- management education and support (DSMES) for all people with diabetes. Included is information on outcomes and the four critical times a person with diabetes should be referred for DSMES. It has a space that can be customized to add DSMES program information.

HAVE DIABETES? *(can be customized)*

This infographic includes information on the importance of diabetes self-management education and support (DSMES) for people with diabetes. It emphasizes recommended times for seeing a diabetes educator, how uncontrolled blood sugars can affect the body and tips to help reduce diabetes-related complications. It has a space that can be customized to add DSMES program information.



Available for download in the KDN Toolbox at:
http://www.kydiabetes.net/kdncontinuousqualityimprovementtoolkit.html

Have You Heard?

AADE Launched NEW *DANA App*

The American Association of Diabetes Educators (AADE) recently launched the Diabetes Advanced Network Access (DANA) App designed to bridge the diabetes technology gap.

Access the DANA App at:
http://www.danaapps.org/?utm_source=Email%20Blue&utm_medium=Blue%20CTA%20button&utm_campaign=DANA%20App

Resources for Erectile Dysfunction

Boston Scientific offers the EDiabetesTalk.com through the *AMS Men's Health* website, built specifically for diabetes educators to access Erectile Dysfunction (ED) information. Visit EDiabetesTalk.com to:

- **Learn what causes erectile dysfunction (ED) and the link between diabetes and ED**
- **Get "Tips for the Talk" from Janis Roszler, CDE**
- **Find tools, videos and resources to aid patient discussions**
- **Find an ED specialist to help patients find their best cure**

FREE Diabetes Outlook Patient Education Gift Bags

Diabetes Outlook
Gaining Control of Your Future
FREE Patient Education Kits for Diabetes Care Professionals

FREE GIFT BAGS AVAILABLE!

Order free gift bags for your patients with diabetes — completely FREE of charge including shipping.

Order online at:
www.adialogue.com/DO

NEW Provider Compliance for Diabetes Test Strips

The Centers for Medicare and Medicaid Services (CMS) released a NEW *Provider Compliance Tips for Diabetes Test Strips.*

Includes:

- **Tips for providers including physicians and other practitioners who write prescriptions for test strips as well as durable medical equipment (DME) suppliers**
- **Reasons for denials**
- **How to prevent claim denials**
- **Type of order needed to submit a claim**

Download at: https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/ProviderComplianceTipsforDiabeticTestStrips-ICN909185.pdf

AADE American Association of Diabetes Educators

AADE Offers FREE Continuing Education

The American Association of Diabetes Educators (AADE) offers free and low-cost continuing education to nurses, dietitians, and pharmacists.

For a full list of offerings, prices or to register, visit: https://www.diabeteseducator.org/about-aade/membership/free-continuing-education

- **The AADE Diabetes Prevention Program (DPP) Model** *(Recorded 7-26-17)*
  (1.0 hour) Members: $0.00 Non-Members: $0.00
- **How to be a Medicare Diabetes Prevention Program Supplier** *(Recorded 2-22-17)*
  (1.0 hour) Members: $0.00 Non-Members: $0.00
- **Individualizing Type 2 Diabetes Treatments with GLP-1 RA CVOT Outcomes Data** *(Recorded 12-7-17)*
  (1.5 hours) Members: $0.00 Non-Members: $34.95
- **Zeroing in on A1C Targets: Pinpointing Optimal Basal Insulin in T2DM** *(Recorded 10-25-17)*
  (1.5 hours) Members: $0.00 Non-Members: $34.95

The Latest Advances in Diabetes Management

October 26, 2018

London Community Center
London, KY

For more information visit:
http://soahec.org/cecme/

Southern Kentucky AHEC
Improving health through education.

Diabetes Education Offerings

Tri State Association of Diabetes Educators (TRADE) Annual Workshop

(Tentative Date March 21, 2019)

TRADE
Tri-State Association of Diabetes Educators
A LOCAL NETWORKING GROUP of the
AADE American Association of Diabetes Educators

Watch for Updates on Topics and Location

Contact: Merritt Bates-Thomas
merritt.thomas@grdhd.org

Kentucky Statewide Diabetes Symposium 2018

November 2, 2018

Marriott East—Louisville, KY

Nurses, Dietitians, and Pharmacists earn continuing education.
Certified Diabetes Educators earn hours toward certification.

For information: julie.shapero@nkyhealth.org or janice.haile@ky.gov

Mark Your Calendar Now
Don't Miss It!

PARTICIPANT ONLINE REGISTRATION
https://tinyurl.com/KYDiabetes2018

KADE Diabetes Educator Meetings Scheduled

The Kentucky Association of Diabetes Educators (KADE), *(covers Lexington and Central Kentucky)*, meets quarterly *(time & location vary)*. For a schedule or more information, go to **www.kadenet.org** or contact: Dee Deakins Sawyer **dee.deakins@uky.edu** or Diane Ballard **dballard@kyde.com**.

RSVP Needed For All Events www.kadenet.org

Kentucky Diabetes Network (KDN) Meetings Scheduled

The Kentucky Diabetes Network (KDN) is a network of public and private health care professionals and advocates striving to improve the treatment and outcomes for Kentuckians with diabetes, to promote early diagnosis, and ultimately to prevent the onset of diabetes.

Anyone interested in improving diabetes outcomes in Kentucky may join. Membership is free. A membership form may be obtained at **www.kydiabetes.net** or by calling 502-564 -7996 *(ask for diabetes program)*.

KDN 2018 Meeting Dates
10 am - 3 pm Eastern
December 7th— Frankfort
Register for a KDN Quarterly Meeting online:
www.kydiabetes.net

DECA Diabetes Educator Meetings Scheduled

Diabetes Educators of the Cincinnati Area (DECA) *(covers Northern Kentucky)* invites anyone interested in diabetes to our programs. Please contact Susan Roszel at: **susan_roszel@trihealth.com** 513-977-8942. Meetings are held in Cincinnati four times per year at the Good Samaritan Conference Center unless otherwise noted.

Registration 5:30 PM — Speaker 6 PM
1 Contact Hour
Fee for attendees who are not members of National AADE.

GLADE Diabetes Educator Meetings Scheduled

The Greater Louisville Association of Diabetes Educators (GLADE), *(covers Louisville and the surrounding area)*, meets the second Tuesday every other month. Registration required. For a meeting schedule or to register, contact Anne Ries at 502-852-0253 **anne.ries@louisville.edu** or Nick Valiyi at **nick_valiyi@hotmail.com**.

TRADE Diabetes Educator Meetings Scheduled

The Tri-State Association of Diabetes Educators (TRADE), *(covers Western KY / Southern IN / Southeastern IL)* meets quarterly from 10 am – 2:15 pm CST **with complimentary lunch and continuing education.** To register, email **Merritt Bates-Thomas at: merritt.bates-thomas@grdhd.org or 270-686-7747 x3018.**

TRADE 2019 PROGRAMS
(Tentative Dates)

February 21, 2019 — Bowling Green

TRADE Annual Workshop
March 21, 2019
Evansville, IN

July 18, 2019 Madisonville, KY

October 17, 2019 Jasper, IN

Endocrinologists Meetings Scheduled

The Ohio River Regional Chapter of the American Association of Clinical Endocrinologists (AACE) and the Kentuckiana Endocrine Club (KEC) meet on a regular basis.

For a schedule of meetings, contact Vasti Broadstone, MD, phone 812-949-5700 or email: **doctor_broadstone@Hotmail.com**

The Kentucky Prescription Assistance Program (KPAP) and the Health Care Access Hotline can connect Kentuckians to free or reduced cost prescriptions for many illnesses, conditions, and diseases, including mental health. Eligibility is set by drug manufacturers and discount pharmacy programs. Even those with insurance may be eligible.

Call: 1-800-633-8100
Visit: http://chfs.ky.gov/dph/info/dpqi/KPAP.htm

Learn About CDC's National Diabetes Prevention Program
http://www.cdc.gov/diabetes/prevention/index.htm

Kentucky Diabetes Connection

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Permit # 120

Editor
PO Box 309
Owensboro, KY 42302-0309

NEED A KY DIABETES RESOURCE?

Kentucky Diabetes Resource Directory
Update your entry information
https://prd.chfs.ky.gov/KYDiabetesResources/

Contact Information

American Diabetes Association.
Cure • Care • Commitment®
www.diabetes.org
1-888-DIABETES

TRADE
Tri-State Association of Diabetes Educators
A LOCAL NETWORKING GROUP of the AADE American Association of Diabetes Educators

KDN
KENTUCKY DIABETES NETWORK, INC.
www.kydiabetes.net

KENTUCKY ASSOCIATION of DIABETES EDUCATORS
KADE
Local Networking Group of AADE
A LOCAL NETWORKING GROUP of the AADE American Association of Diabetes Educators
www.kadenet.org

GREATER LOUISVILLE ASSOCIATION OF DIABETES EDUCATORS
GLADE
A LOCAL NETWORKING GROUP of the AADE American Association of Diabetes Educators
www.louisvillediabetes.org

KENTUCKY DIABETES PREVENTION AND CONTROL PROGRAM
KDPCP
www.chfs.ky.gov/diabetes/

JDRF IMPROVING LIVES. CURING TYPE 1 DIABETES.
www.jdrf.org/chapters/KY/Kentuckiana
1-866-485-9397

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Ohio River Regional Chapter
Kentuckiana Endocrine Club
doctor_broadstone@Hotmail.com

Kentucky Public Health

This publication is supported by a Cooperative Agreement, Number DP13-1305, funded by the Centers for Disease Control and Prevention (CDC) to the Kentucky Department for Public Health (KY DPH). The contents are solely the responsibility of the authors and do not necessarily represent the official views of CDC or the KY DPH.